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THE BIRDS OF THE SAGE WEST CHINA EXPEDITION

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The Sage West China Expedition had as its main object the collecting of mammals of eastern Szetchuan. Notwithstanding the fact that the collection of birds was only a secondary object of the expedition, a fine collection of 426 specimens was obtained from a region which was particularly poorly represented in The American Museum of Natural History. This collection has filled many gaps in our material, and the study of these birds has helped to clear up a number of doubtful points concerning the taxonomy of the birds of western China.

The staff of the expedition consisted of Mr. and Mrs. Dean Sage, Jr., William G. Sheldon, and T. Donald Carter.

The collecting stations were as follows:

Wenchwan, W. Szetchuan, September 15, 1934; 1 bird collected.

The Chen Liang Shan Range, 30 mi. W. of Wenchwan, 9500 feet altitude, September 26–October 12; 18 birds collected.

Tsao Po, 18 mi. S. W. of Wenchwan, 5000 feet altitude, October 12, 14, 16–November 1, 4, and December 9, 11; 128 birds collected.

Near Tsao Po, 8700 feet altitude, October 20; 2 birds collected.

La Pei, Cheng Gou Creek, 20 mi. W. of Wenchwan, 6000 feet altitude, October 21; 2 birds collected.

Cheng Wei, Cheng Gou Creek, 25 mi. W. of Wenchwan, 6000 feet altitude, October 23–November 24, and December 5, 6; 133 birds collected.

Cheng Gou Forks, 30 mi. W. of Wenchwan, November 26–December 4; 66 birds collected.

Cheng Gou, 25 mi. W. of Wenchwan, December 6, 8; 19 birds collected.

Cheng Gou, 7000 feet altitude, December 9, 10; 12 birds collected.

Mao Mo Gou, 30 mi. W. of Wenchwan, 8600 feet altitude, November 19, 21, 23, and 25; 7 birds collected.

Chengtu, December 23–25; 32 birds collected.

Min River, 40 mi. S. of Kiating, January 9, 14, 1935; 5 birds collected.

Near Nankin, February 10, 1935; 1 bird collected.

In the working out of the collection I was greatly assisted by Dr. Ernst Mayr, to whom I am much indebted for his advice and in joint authorship with whom some of the new subspecies are described. The curators of the Museums in Cambridge, Philadelphia, Washington, and Chicago sent us considerable material for comparison, and Dr. Boris Stegmann gave us valuable information on the *Ithaginis sinensis* group.

Thanks are also due to the Chinese Government, by whose coöperation the expedition was made possible.

The treatment of this collection differs somewhat from that in similar papers. I have not listed every one of the 86 forms that were obtained by the expedition, but have restricted my remarks to those species in which the study of the material has contributed new facts concerning the distribution or geographical variation of the birds of western China.

Falco tinnunculus interstinctus McClelland

1 ad. ♀, Oct. 24, Tsao Po, and 1 ad. ♂ (no date), Cheng Gou. These two birds are definitely *Falco tinnunculus interstinctus.*

Falco tinnunculus stegmanni (Portenko)

1 ad. ♂, Oct. 25, Tsao Po. This Central Asiatic race extends apparently all the way from Turkestan to Mongolia through the dry highlands. In addition to the Carter-Sage specimen, I have examined winter birds from Yunnan, as well as a series from Turkestan.

Tetraophasis obscurus Verreaux

One specimen (ad. ♂) of this rare species was obtained at Tsao Po (5000 feet) on November 4, 1934.

Ithaginis cruentus

sinensis group

Only three forms (*sinensis, berezowskii,* and *michaelis*) have thus far been recognized in the *sinensis* group of *Ithaginis cruentus.* An examination of our material reveals that there are two additional undescribed forms.

These five forms can be divided quite naturally in two groups: one has the brown of the wing-coverts frequently mixed with red, and not or only little washed with green (Szetchuan and *berezowskii*); the other has the rufous brown of the wing-coverts strongly washed with green (*michaelis,* north Kansu), while typical *sinensis* occupies an intermediate position. The two groups also differ in some other characters, with *sinensis* again being more or less intermediate between the *berezowskii* group and the *michaelis* group.

Ithaginis cruentus annae Mayr and Birckhead, new subspecies

TYPE.—No. 450995, Amer. Mus. Nat. Hist.; ♀ ad.; Cheng Gou Forks (7600 ft.), 30 miles west of Wenchwan, Szetchuan; Dec. 4, 1934; Sage-Carter coll.

MALE.—Similar to *I. c. berezowskii* Bianchi, but more richly colored and averaging smaller, the black bordering the white shaft-streaks of the back narrower; the feathers of the neck paler gray, the brown of upper wing-coverts and inner secondaries darker, the white stripes on ear-coverts and head-tuft broader, the crown paler gray and more distinctly streaked with white, and the under tail-coverts warmer, more orange-red.

FEMALE.—Similar to that of *berezowskii*, but considerably darker and more earth brown, less tawny; black vermiculation of upper parts more pronounced; rump and tail with a distinct gray wash; upper throat, sides of head, and crest of a purer gray, not brownish.

Wing, ♂ ad., 193, 197, 199, 200, ♀, 184, 191; tail, ♂ ad., 167, 170, 170, 178, ♀, 142, 146; tarsus, 62–63.

1 ad. ♂, Oct. 3, 2 ad. ♂, Oct. 12, and 1 ad. ♀, Oct. 8, Chen Liang Shan Range; 4 ad. ♂, Oct. 30, 2 ad. ♂, Nov. 1, 1 ad. ♂, Nov. 4, 3 ad. ♀, Nov. 13, 16, and 26, 2 ad. ♀, Nov. 29, and 2 ad. ♀, Nov. 4, Tsao Po; 3 ad. ♂, Nov. 1, 3 ad. ♂, Nov. 3, 2 ad. ♂, Nov. 5, 3 ad. ♂, Nov. 10, 16, and 20, 2 ad. ♀, Nov. 3, and 1 ad. ♀, Nov. 4, Cheng Wei, Cheng Gou Creek; 1 ad. ♀, Dec. 23, Cheng Gou Forks; and 1 ad. ♂, Dec. 9, Cheng Gou.

RANGE.—Northwest Szetchuan.

REMARKS.—The series of *annae* is quite variable; one bird has the greater upper wing-coverts heavily washed with red, two others just slightly so, and two show no red at all; the ear-tufts are extensively streaked with white in some birds, in others, they are pure black; variable are also the amount of greenish wash on the white shaft-streaks of the lower back, the amount of red on forehead and chin, and the width of the white streaks of the upper parts.

Three males collected by Weigold at Sungpan, northeast Szetchuan, are intermediate between *annae* and *berezowskii*, but nearer to *annae*. The females, however, collected at the same locality, are very much closer to *berezowskii*. It is probably best to include this intermediate population with *berezowskii*.

The type locality of *I. s. berezowskii* Bianchi is the southernmost part of Kansu, in the vicinity of the villages Dju-djuau and Satani, in the Siku district. Since we have no material from this district, we sent some specimens of *annae* to Dr. B. Stegmann (Leningrad) who very kindly made the following comments (April 10, 1937): "Your specimens from Szetchuan belong undoubtedly to a new form. They are similar to *berezowskii*, but generally darker, the brown coloration of the innermost secondaries deeper, and the markings ("Zeichnung") more pronounced. The only female of *berezowskii* is considerably lighter and

more reddish brown than your specimen; throat and chin are less gray, more fawn-colored. One should not forget, of course, that your specimens are in fresh plumage and recently collected, while our specimens are mostly summer birds and have been collected quite some time ago. The difference is, however, so great that it cannot be explained by wear and by post-mortem changes in the collection." He very kindly sent us an adult male from the type locality which fully agreed with the comments in his letter.

It gives us great pleasure to name this new subspecies in honor of Mrs. Anne Sage, who has done so much for the success of this expedition, and who has herself collected and prepared a large proportion of the bird-skins.

Ithaginis cruentus berezowskii Bianchi

Ithaginis sinensis berezowskii Bianchi, 1903, Annuaire Mus. Zool., St. Petersbourg, VIII, pp. 5–6.—Southern Kansu, near the villages of Dju-djuau and Satani in the Si-ku (or Si-gou) district.

Differs from *annae* as described above; characterized (in comparison with the other races) by the small size, rather dark coloration of the males, by the red wash of chin and cheeks, by the brown secondaries and upper wing-coverts which are washed with red, not with green, and by the warmer red of under tail-coverts and edges of tail-feathers.

Adult male: wing, 202; tail, 156; tarsus, 61.

Range.—South Kansu and adjacent part of north Szetchuan (Sungpan).

Sungpan birds, which are not quite typical, measure as follows: wing, ♂ ad., 196, 205, 207, ♀ 193, 198, 202, 204; tail, ♂ 157, ♀ 135, 140, 152, 155; tarsus, ♂ 63, 63, 65, ♀ 60, 61, 63, 63.

Ithaginis cruentus sinensis David

The remaining forms of the *sinensis* group have been much confused, because none of the previous authors had all the forms before him and wrong names were applied to certain populations by all of them. Bianchi (*loc. cit.*) assumed erroneously that a series of birds from northern Kansu was identical with typical *sinensis* (described from southern Shensi) which he had not seen, while in fact it was an undescribed form (see below). Hartert (Vögel pal. Fauna) accepted Bianchi's use of *sinensis* for the north Kansu birds, but recognized that south Shensi birds were quite different. Not having seen *berezowskii*, he called them *berezowskii*, although they were actually the typical *sinensis*. Recognizing the vast difference between Shensi and Szetchuan "*berezowskii*,"

we sent a series of each to Dr. Stegmann for comparison with the actual *berezowskii*. He informed us, as we had suspected, that neither of them was *berezowskii*, and advised a study of the name of *sinensis* to settle whether it applied to the Tsinling Mt. (Shensi) or to the north Kansu population. We are very grateful to Dr. B. Stegmann for his detailed comments on the various forms.

Ithaginis sinensis was discovered by David "in the highest mountains of southern Shensi." He found it "in the center of the Tsinling Mts. at an altitude of 3500 m.," between Lao-ling and Honan. These two localities are apparently at the northern slope of the Tsinling Mts., while Mt. Tai-pai-shan, where Allan Owston's collectors took a large series for Lord Rothschild, is on the southern slope. There is no reason to believe that the birds from the north and south slope should be different in this region where they are a high mountain species, particularly since all these localities are apparently fairly close together. Furthermore, the characters shown on plate 114 of David and Oustalet, 'Oiseaux de la Chine,' Vol. II, as well as given in the detailed description (*op. cit.*, Vol. I, p. 402) apply excellently to our Tsinling Mt. series, but not to the northern Kansu birds.

The subsequent description of *sinensis* is based on a series of over 50 specimens from Tai-pai-shan, Tsinling Mts.

Ithaginis cruentus sinensis David

Ithaginis sinensis DAVID, 1873, Ann. Sci. Nat., Zool., (5) XVIII, Art. 5, p. 1.—Tsinling Mts., Shensi.

MALE.—A very dark form; the white shaft-streaks on the back are very narrow and the black bordering it, very wide; white shaft-streaks on the rump broader and frequently tinged greenish; very little or no red on forehead, cheeks, and chin; crown, nape, and sides of neck dark gray; wing (= innermost secondaries and greater upper wing-coverts) rufous brown, not at all mixed with red and only faintly tinged with green; the whitish shaft-streaks of the greater upper wing-coverts broadly edged with black, which makes them very conspicuous; most of the green feathers of breast and flanks with narrow or broad black edges; under tail-coverts and edges of tail-feathers warm red, but not as scarlet (not as mixed with orange), as *berezowskii* or *annae;* size rather small.

FEMALE.—Lighter and more rufous brown than female of *annae;* quite pale on the under parts; differs from north Kansu birds by the rufous, not grayish, coloration of the upper parts and by the darker color of the under parts.

MEASUREMENTS.—Adult males (fresh plumage): wing, 203, 204, 206, 207, 207, 208, 210; tail, 162, 167, 168, 172, 172, 177, 177; tarsus, 59, 60, 61, 63, 63, 64, 65. Females, wing, 191, 194, 195; tail, 140, 142, 142; tarsus, 58, 59, 60.

RANGE.—Tsinling Mts., Shensi, southern and northern slope.

Ithaginis cruentus beicki Mayr and Birckhead, new subspecies

TYPE.—No. 446867, Amer. Mus. Nat. Hist.; ♂ ad.; Tschau-tou, Sining district, north Kansu; February 15, 1927; W. Beick.

MALE.—Light and large; general coloration of upper parts similar to *berezowskii;* white shaft-streaks on back average slightly narrower, but black borders are the same width; shaft-streaks on rump usually white; usually no red on forehead, cheeks, and chin; crown and nape light gray; brown of wing without red, but conspicuously washed with green; shaft-streaks on greater upper wing-coverts greenish or brownish green narrowly bordered with black; green feathers of breast and flanks usually without black margins; under tail-coverts and edges of tail-feathers a cold pinkish red with a slight purplish tinge.

FEMALE.—Large and pale; crest and sides of face gray; back, rump, and tail with a strong grayish tinge.

MEASUREMENTS.—Ad. males: wing, 204, 208, 209, 212, 214, 216, 216, 217, 217, 218, 219, 220, 225; tail, 170, 174, 178, 181, 184, 185, 187, 188, 191, 192, 194, 196, 196; tarsus, 61–66. Ad. females: wing, 192–211 (201.6); tail, 155–169 (161.0); tarsus, 55–63 (60.0).

RANGE.—Northern Kansu, Chortentan, Tetung River, (Przewalski, Kozlow), South Tetung Mts., Tsan-fou at the Tetung River (Beick).

A male collected by Przewalski in February (apparently at Chortentan) and a male collected by Beick at Honanpa (see map, Journ. f. Ornith., 1937, p. 404) have the rump slightly washed with green and indicate a tendency toward *michaelis.*

Ithaginis cruentus michaelis Bianchi

Ithaginis sinensis michaelis BIANCHI, 1903, Annuaire Mus. Zool., St. Petersbourg, VIII, pp. 3–4.—Northern slope of Nan-Shan Mts.

MALE.—Similar to *beicki,* but paler gray; shaft-streaks of middle and lower back, rump, and upper tail-coverts washed with green; less red on the edges of the tail-feathers.

FEMALE.—Unknown to us.

SIZE.—Approximately as in *beicki.*

RANGE.—Chycho River, northern slope of the Nan-Shan Mts.; Baboche, Edzingol River; Mt. Ngin-sin-shan, N. Kokonor Barrier Range.

Pucrasia macrolopha ruficollis David and Oustalet

2 ad. ♂ and 2 ad. ♀, Oct. 15, Chen Liang Shan Range (9500 ft.); 2 ad. ♂, Oct. 20, 2 ad. ♂, Oct. 25 and 26, 3 ad. ♂, Oct. 29, 2 ad. ♂, Oct. 30 and Nov. 1, 1 ad. ♀, Oct. 14, and 2 ad. ♀, Oct. 25, Tsao Po (5000 ft.); and 2 ad. ♂, Nov. 3 and 5, 1 ad. ♀, Nov. 1, and 2 ad. ♀, Nov. 7, Cheng Wei, Cheng Gou Creek (6000 ft.).

I have seen no topotypical material from Shensi, but the Sage specimens agree very well with the description. Besides the characters

given by Hartert (V. p. F., III, p. 1973), there are the following additional ones, as compared with *xanthospila* from Chili: under tail-coverts and stripes of the tail mostly black or blackish, not rufous; under parts darker rufous, less yellowish, and more mixed with black streaks; rest of under parts more heavily streaked with black; gray central shaft-streaks of the feathers of the upper parts narrower and less speckled with black centrally.

Phasianus colchicus suehschanensis Bianchi

1 ad. ♂, Nov. 10, La Pei, Cheng Gou Creek (6000 ft.); and 4 ad. ♂, Nov. 4, 7, and 10, and Dec. 5, Cheng Wei, Cheng Gou Creek (6000 ft.).

A small series collected at Cheng Wei, Cheng Gou Creek, 25 miles west of Wenchwan, represents an interesting locality for this form, which was described from Sungpan. The specimens collected in November and December are in perfect fresh plumage and differ from two worn birds from the type locality (Sungpan) as follows: crown more glossed with purple; feathers of upper parts very much more glossed with bronze-green; basal areas of central rump-feathers bronze-green, not bluish green; long lower rump-feathers and edges of central rump-feathers buffy glossed with bronze-green, not gray glossed with bluish green. These differences may be due to plumage condition.

Picoides tridactyla funebris Verreaux

1 ad. ♂, Dec. 10, Cheng Gou Creek; and 1 ad. ♀, Nov. 19, Mao Mo Gou.

The white markings are somewhat more extensive throughout in the two Carter-Sage birds than in a single specimen from the Lichiang Range, particularly on the lower belly and flanks, where the spots merge to form distinct, interrupted white crossbars, and on the wings. However, on examining large series of *P. t. funebris* from various parts of Yunnan and western Szetchuan from the Museum of Comparative Zoölogy at Cambridge, the Philadelphia Academy of Sciences, the Smithsonian Museum at Washington, and the Field Museum at Chicago, I find that these differences are merely due to individual variation.

Dryocopus martius reichenowi Kothe

2 ad. ♂, Nov. 8 and 10, Cheng Wei, Cheng Gou Creek.

The question of races of this species is still open (see Hartert and Steinbacher, Erg. V. p. F., p. 377). The two Sage birds are very deep black and are large (wing, 2 ♂ ad., 249, 251), but with very short bills.

Two Yunnan birds are equally black and have the broadest bills in our entire series.

Pycnonotus sinensis sinensis (Gmelin)

1 ad. ♀, Chengtu. This locality near the border of the range of the species seems worth recording.

Troglodytes troglodytes szetschuanus Hartert

2 ad. ♂, Nov. 9 and 15, Cheng Gou Creek; 1 unsexed specimen, Nov. 30, Cheng Gou Forks, and 1 ad. ♂, Nov. 21, Mao Mo Gou.

Since it has been frequently questioned whether there were any valid differences between *szetschuanus* (northwestern Szetchuan) and *talifuensis* (Yunnan), it might be valuable to describe these differences:

Troglodytes troglodytes talifuensis Sharpe.—General color above dark, tinged with rufous even on the crown; dark bars of lower back usually less complete, forming less continuous bars, and more or less obscured on lower back. Below light buff, incompletely barred. Six specimens examined.

Troglodytes troglodytes szetschuanus Hartert.—General color above dark and much more olivaceous, less tinged with rufous; crown olivaceous brown, not dark rufous brown. Barring more complete and extensive on upper back. Below much darker, grayer, and more extensively and heavily barred. No difference in size. Six specimens examined.

Tarsiger chrysaeus vitellinus Stresemann

1 ad. ♀, Oct. 3, Chen Liang Shan Range.

My material shows no differences between the males of *vitellinus* and *chrysaeus*. Females, however, in fresh autumn plumage from Yunnan, Szetchuan, and the Tsinling Mts. are paler yellow, less orange-yellow below, and more greenish olivaceous, less orange-olivaceous above than Sikkim females in the corresponding plumage, though a large series of Tsinling Mts. females in worn spring plumage approaches them in color. Apparently the general color of the plumage of the upper parts and especially of the tail becomes more orange with wear, and the olivaceous edges of the feathers at the side of the breast wear off.

Tarsiger indicus yunnanensis Rothschild

1 ad. ♂, Nov. 9, Cheng Wei, Cheng Gou Creek.

It seems to be interesting to record this occurrence of this rare species.

Phoenicurus auroreus auroreus Pallas

1 ad. ♂, Dec. 23–25, Chengtu.

There is a considerable amount of variation in this species, and the extensive migrations of the northern populations make it difficult to work out the characters of the various races.

The measurements of sixty-four adult males from the entire eastern range show that there are no differences in size but there seem to be differences in coloration. Males in fresh plumage from Japan and the vicinity of Vladivostok differ from a series from the Tsinling Mts. in comparable plumage by having crown and nape somewhat less blue-gray and by having the feathers of crown, nape, and back usually edged with more brown.

Phoenicurus a. leucoptera can probably be accepted for the Yunnan birds and the migrants farther south (Burma, etc.). The black gorget of these specimens is more extensive and of a deeper and glossier black. The feathers of the back have no or only narrow brown edges; the gray of crown and nape is darker and the feathers show little or no brown edging when fresh. In worn condition only the nape shows some whitish, the crown remaining gray to the end of the breeding season. The under parts are deeper, more rufous, less buffy than in *P. a. auroreus*. Females of *leucoptera* differ from those of *auroreus* in being slightly more olivaceous, less rufous above, and slightly darker and less yellowish below, especially on breast and throat.

Phoenicurus frontalis sinae Hartert

5 adult ♂, Cheng Wei, Oct. 27, Nov. 3, 4, 6, and 7, and 6 adult ♀, Nov. 2, 4, 6, 7, 9, and 17, Cheng Gou Creek, Cheng Wei.

Material of a hundred and ten specimens shows that birds from the Tsinling Mts. are distinctly lighter red than birds from the Himalayas. The blue parts are lighter and more greenish and the orange-brown parts are also distinctly lighter; specimens from Szetchuan are somewhat intermediate.

Turdus merula subspecies

1 specimen (no date, but probably Dec.), Chengtu.

The measurements (wing, 154; tail, 111) of the single adult male agree with those of a considerable series (64 specimens) of *Turdus merula mandarinus* Bonaparte. The coloration, however, is quite different. It is much blacker, and the brown edges of the feathers of the throat are much less conspicuous. The remainder of the under parts is very much darker. This specimen appears to be intermediate between *mandarinus* and *intermedius*.

Grandala coelicolor Hodgson

4 ad. ♂ and 1 imm. ♂, Nov. 26, Cheng Gou Forks, and 5 ad. ♂, Dec. 7, and 5 ad. ♂, Dec. 10, Cheng Wei, Cheng Gou Creek.

A splendid series of fourteen males overlaps in its measurements (wing 14 ♂ adult, 140–147 (144.0)) so much with Sikkim birds (Journ. Bombay Nat. Hist. Soc., XXXVI, 1934, p. 358) that it seems unwise to recognize *florentes* Bangs.

Garrulax cineracea cinereiceps Styan

3 ad. ♂, Nov. 2 and 8, and Dec. 8; and 3 ad. ♀, Nov. 8, 9, and 10, Cheng Wei, Cheng Gou Creek; and 1 ad. ♂, Nov. 20, Mao Mo Gou.

There has been some argument about the correct name of this subspecies. La Touche ('Birds of Eastern China,' I, p. 61) believes that the name *cinereiceps* refers to the black-headed subspecies with the buffy superciliary, ear-coverts, and sides of the head. Bangs (1932, Field Mus., Zool. Ser., XVIII, p. 355) has emphasized, however, that both description and plate of *cinereiceps* refer to the gray-headed subspecies (hence the name) with rufous on the sides of the head, the form to which this name has always been applied (see also Greenway, M. C. Z. Bull. 74, p. 132). The fact that we have a juvenile which moults directly from the rufous-headed plumage into the black-headed is additional proof against La Touche's theory that the gray-headed birds are immature, and that *styani* has a gray-headed immature plumage.

A detailed description of the two races reads as follows:

Garrulax cineracea cinereiceps.—Crown and nape gray or gray with blackish centers to the feathers, sometimes olivaceous or olivaceous with blackish centers to the feathers, rather variable. Patch in front of the eye, short stripe above the middle of the eye, cheeks, and forward part of ear-coverts white or whitish; superciliary stripe broadening posteriorly and shading into olivaceous on sides of neck, posterior part of ear-coverts and sometimes the basal part of the feathers of the malar stripe more or less bright rufous; black postocular stripe short and inconspicuous; breast vinaceous buff; belly orange-buff, darker, and more olivaceous on the flanks, deeper and brighter on the thighs and crissum; upper parts olive-colored, variable but usually tinged rather rufous.

Garrulax cineracea styani.—Crown black (except in juvenile plumage, when it is the same rufous-olive color as the back), the black extending backward to the upper mantle, where it forms an irregular patch in six of a series of nine birds from northwest Yunnan and ending on the nape in two birds from Tsekou, Yunnan, and one from Ta-tsien-lu, southwest Szetchuan. Rufous of superciliary line and ear-coverts lighter, more olivaceous, and shading more gradually into the white of the region below and in front of the eye, which is grayer, less pure white; black postocular stripe longer and more noticeable, frequently extending backward as far as the back of the ear-coverts; under parts lighter; breast a much lighter, not so

vinaceous buff; belly, flanks, thighs, and crissum all lighter and less tinged with orange; back averaging more olivaceous, less rufous, than in *G. c. cinereiceps.*

Garrulax lunulata (Verreaux)

1 ad. ♂, Nov. 20, Mao Mo Gou; and 2 ad. ♂, Nov. 8, and Dec. 8; and 2 ad. ♀, Dec. 8 and 9, Cheng Wei, Cheng Gou Creek.

It might be interesting to record the localities at which these specimens were collected.

Garrulax elliotii elliotii Verreaux

4 unsexed specimens, Oct. 24, Tsao Po; 2 ad. ♂, Nov. 1, 1 ad. ♂, Nov. 13, 1 ad. ♂, Dec. 5, and 1 ad. ♀ (no date), Cheng Wei, Cheng Gou Creek; and 1 ad. ♂, Dec. 1, 1 ad. ♂, Dec. 3, 2 ad. ♀, Nov. 27, 1 ad. ♀, Dec. 1, 1 ad. ♀, Dec. 3, 2 ad. ♀, Dec. 4, and 1 unsexed specimen, Nov. 28, Cheng Gou Forks.

Seven males from Szetchuan measure: wing 91–101 (95.2), tail 122–132 (126.1), while two males from Kansu are larger, wing 104.5, 106.5 (105.5) and tail 140, 146.5 (143.2). I agree with Riley that *G. e. prjevalskii* is a valid race (Riley, 1930, Proc. U. S. Nat. Mus., No. 2838, p. 24).

Pteruthius xanthochloris pallidus (David)

1 ad. ♂, Nov. 29, Cheng Gou Forks.

The Carter-Sage bird is *Pteruthius xanthochloris pallidus*, but differs from eight other specimens of that race as follows: gray of nape cut off more definitely above the upper mantle, not extending down into it and fading gradually into the olive of the back; back a brighter olive, less pale grayish; and bill narrower, although that may be because it was tied up tightly with string. These points of difference may be individual variation.

Material Examined.—*P. x. xanthochloris:* 3 ad., Sikkim. *P. x. pallidus:* 1 ad. ♂ and 1 ad. ♀, Kwanhsien, middle Min Ho, Szetchuan; 1 ad. ♂, Lichiang Range, N. W. Yunnan; 1 ad. ♂, Mekong-Salwin Divide, 10,000–11,000 feet; and 2 ad. ♀, Mekong-Salwin Divide, 7000–9000 feet and 8000–10,000 feet.

Fulvetta chrysotis swinhoii (Verreaux)

1 ad. ♂, Nov. 30, Mao Mo Gou; and 2 ad. ♂, Dec. 2 and 4, Cheng Gou Forks.

Rothschild (1926, Bull. Brit. Orn. Club, XLVI, p. 64), when describing *F. c. forresti*, said that it was a deeper yellow than *F. c. swinhoii.* However, he was comparing fresh specimens (Forrest, 1919) with two

older ones (Weigold, 1915). The newly collected Carter-Sage birds, from the same region as the pale Weigold specimens, are brighter than any others of the species. This species seems extensively given to fading, as is proved by the series before me, where the newest specimens are the brightest and the oldest, the palest. The true differences between *swinhoii* and *forresti* are:

F. c. swinhoii, Szetchuan.—No yellow eye-ring; throat patch uniform dark slaty gray extending down on breast.

F. c. forresti, N. W. Yunnan.—Yellow eye-ring sometimes small and sometimes lacking; throat patch lighter gray, occupying only the throat, not extending onto the breast.

Alcippe cinereiceps cinereiceps (Verreaux)

1 ad. ♂, Nov. 9, 1 ad. ♂, Nov. 11, 2 ad. ♂, Dec. 5, 1 ad. ♂, Dec. 8, and 1 ad. ♀, Dec. 5, Cheng Wei, Cheng Gou Creek; 4 ad. ♂, Nov. 27, 28, 29, and 30, 3 ad. ♂, Dec. 1, 1 ad. ♀, Nov. 28, 2 ad. ♀, Dec. 2, and 1 ad. ♀, Dec. 4, Cheng Gou Forks.

These localities of the rare species are of interest.

Yuhina diademata diademata Verreaux

1 ad. ♂, Oct. 28, 1 ad. ♂, Nov. 6, 1 ad. ♀, Nov. 11, and 1 unsexed specimen, Nov. 6, Cheng Wei, Cheng Gou Creek; and 1 ad. ♂, Dec. 2, Cheng Gou Forks.

Specimens of this species are apt to fade very rapidly. The Carter-Sage birds are considerably darker than sixty other specimens that were collected earlier. The type and a paratype of *Yuhina diademata obscura* Delacour and Jabouille, from Tonkin, are in no respect different from any of the Yunnan or Szetchuan specimens.

Lanius schach schach Linné

1 ad. ♀ and 1 ad. unsexed specimen, Dec. 23–25, Chengtu.

During the comparison of the Sage specimens with our material, I found that Hainan Island is inhabited by an undescribed race.

Lanius schach hainanus, new subspecies

TYPE.—No. 450989, Amer. Mus. Nat. Hist. (Rothschild Collection); ♂ ad.; Hainan Is.; February 14, 1902; Katsumata coll.

Similar to *L. s. formosae* Swinhoe, but much smaller and possibly slightly paler; differs from *schach* by the same characters as *formosae;* under parts white, not suffused with pinkish buff; base of lower mandible in adult specimens always black; usually more gray on the upper back, more black on the forehead, and more black on the outer tail-feathers.

L. s. hainanus.—Wing, 8 ♂ ad. 98–103 (100.9), 5 ♀ ad. 98–101 (99.8); tail, 8 ♂ ad. 122–129 (125.5), 5 ♀ ad. 118–126 (121.8).

L. s. formosae.—Wing, 13 ♂ ad. 103–109 (105.4), 8 ♀ ad. 100–105 (102.5); tail, 13 ♂ ad. 129–138 (134.5), 8 ♀ ad. 124–132 (128.1).

Urocissa erythrorhyncha brevivexilla Swinhoe

1 ad. ♂, Nov. 10, Cheng Wei, Cheng Gou Creek.

My material shows that three subspecies have to be recognized in China:

(1) *Urocissa erythrorhyncha brevivexilla* (type locality: Hills west of Peking) northeastern Szetchuan, the Tsinling Mts., and the province of Chili. Upper parts of body and tail paler than in *erythrorhyncha* with less of a bluish tinge and that of a more purplish shade. Back appearing more grayish, less bluish. Light bluish-gray patch on nape averaging broader, though this may be due to the preparation. Males, wing 187–194; females, wing 184.5–189. 27 specimens examined.

(2) *U. e. erythrorhyncha* (type locality hereby restricted to Canton, South China). Eastern China from the Yangtze southward and eastward to Mengtsz, southwestern Yunnan, and northern Annam. Upper parts averaging darker, more tinged with purplish blue; light bluish-gray patch on nape averaging narrower. The white tips of the innermost secondaries average narrower in this and the next race than in *U. e. brevivexilla.* Some individuals have the tail a brighter, truer, and less purplish blue. Males, wing 170–194, tail 341–408; females, wing 173–193.5, tail 298–423. 69 specimens examined.

(3) **Urocissa erythrorhyncha caerulea,** new subspecies

TYPE.—No. 450991, Amer. Mus. Nat. Hist. (Rothschild Collection); ♂ ad.; Lichiang Range, N. W. Yunnan; October, 1918; George Forrest.

Similar to *U. e. erythrorhyncha,* but upper parts lighter and considerably more bluish, tail of a brighter, purer, and less purplish blue; light bluish-gray patch on nape extensive and more bluish, less whitish; size larger.

7 ♂, wing 202–211 (205.0), tail 406–463 (436.3); 4 ♀, wing 190–205 (198.5), tail 388–416 (398.0).

RANGE.—Lichiang Range, Tengyueh Valley, Shweli-Salwin Divide, western and northwestern Yunnan. 18 specimens examined.

Two males from the Shweli Valley agree with *caerulea* in coloration, but are considerably smaller (wing 184, 187).

Aegithaliscus bonvaloti bonvaloti Oustalet

1 ad. ♂, Nov. 28, and 2 ad. ♂, Dec. 4, Cheng Gou Forks.

The birds that are now combined under the name *Aegithaliscus bonvaloti* form a link between the species *Aegithaliscus fuliginosus* and *A. iouschistos.* The Carter-Sage specimens from Cheng Gou Forks, near Wenchwan, show a definite approach toward *A. fuliginosus,* but possibly not quite as pronounced as a specimen described by Kleinschmidt

and Weigold. The breast-band is dark olivaceous brown, darker than in typical *A. bonvaloti* and without any tinge of reddish brown, but not as dark as in *A. fuliginosus* and not chocolate brown. The flanks are much paler and more pinkish, less rufous, than in the typical birds and are almost identical in color with those of *A. fuliginosus* except that they are a slightly warmer pink, and the thighs are the same color, not chocolate brown, as in *A. fuliginosus.* The throat patch is more silvery gray, as in *A. fuliginosus*, less blackish, as in the typical birds, and in two of the specimens there is a silvery gray sheen on some of the small feathers about the eye, showing an approach to *A. fuliginosus*, which has the whole side of the face silvery gray. The rest of the upper parts is as in typical *A. bonvaloti* except that the light brown of the rear part of the ear-coverts, of the upper edge of the mantle, and of the occipital part of the light crown stripe is slightly duller and darker. I have seen typical specimens of this species from Mupin, Hsingaitse, and Hokow. Two old birds, supposedly from "Ta-tsien-lu" but without exact date and locality, agree much better with a series from Yunnan and southwest Szetchuan, which differs slightly from the typical series by the following characters: breast-band broader, less well defined, and lighter than in typical *A. bonvaloti*, nearly the same color as the flanks but more yellowish. Rufous areas of flanks much more extensive, having a narrower white area in the middle of the belly. Light brown of the rear part of the ear-coverts, of upper edge of mantle, and of the occipital part of the light crown stripe lighter and brighter, being rufous buff, not light brown. Back and mantle frequently gray or grayish, not grayish brown. In most of these characters these birds tend to approach *A. iouschistos*, which, however, I do not think is very closely related to them, despite its similar markings, as it is much smaller and has the white areas of the head replaced by bright buff.

Cholornis paradoxa Verreaux

1 ad. ♀, Nov. 10, Cheng Wei, Cheng Gou Creek.

Two birds from northern Szetchuan are indistinguishable from two Kansu specimens. A single specimen in worn plumage from the Tsinling Mts., Shensi, is, however, so different, that it seems worth while to describe the differences. More material from the Tsinling Mts. is needed before a new race can be named. Some of the difference may also have been accentuated by wear.

Cholornis paradoxa subspecies, Tsinling Mts., S. Shensi.—Similar to *Cholornis paradoxa paradoxa*, but crown lighter and more grayish, less vinaceous; dark super-

ciliary line a cooler, more olivaceous shade of brown; mantle, back, rump, and upper tail-coverts grayer and with less of a yellowish-olivaceous tinge; wings and tail gray, not grayish brown; breast, crissum, and middle of belly very much grayer, less tinged with vinaceous, the middle of the belly being very much lighter, almost whitish; and flanks olivaceous gray, not yellowish or olivaceous brown.

Suthora fulvifrons cyanophrys David

1 ad. ♀, Nov. 23, and 2 ad. ♀, Nov. 24, Mao Mo Gou.

These three specimens of this rare species are highly welcome, since they were collected nearer to the type locality of this form than any other specimen and since the original pair was collected in southwest Shensi. These three birds agree perfectly with the description and with the plate (No. 66) in David and Oustalet's 'Oiseaux de Chine.'

All the other specimens which were collected in recent years in southwestern Szetchuan and Yunnan and which had been identified as *S. f. cyanophrys* David belong to an unrecognized race which might be described as follows:

Suthora fulvifrons albifacies Mayr and Birckhead, new subspecies

TYPE.—No. 450990, Amer. Mus. Nat. Hist. (Rothschild Collection); ♀ ad.; Lichiang Range, Yunnan (11,000 ft.); December 12, 1921; George Forrest coll.

Similar to *cyanophrys*, but duller; the joining of the blue-gray stripes at the nape much less conspicuous; circumocular region, cheeks, parts of ear-coverts, and a broad stripe on the sides of the neck whitish, not rich ochraceous as in *cyanophrys;* back duller and grayer, lacking the bright mustard color of *cyanophrys;* edgings of secondaries and tail-feathers deeper, more rufous; size similar. 24 specimens from N. W. Yunnan examined.

Emberiza cia subspecies

1 ad. ♂, Oct. 1, Cheng Liang Shan Range; 4 ♂, Nov. 1, 2, 10, and Dec. 6, and 1 ad. ♀, Nov. 3, Cheng Gou Creek, Cheng Wei; 1 ♂, Dec. 11, Tsao Po.

The geographical variation of this species is still insufficiently understood, in spite of all the work done in recent years. I do not want to add any more names to the many that have been proposed already and content myself in describing the various populations which I can differentiate in the collections of the American Museum. The descriptions of the four West China populations are as follows:

Emberiza cia subspecies 1.—W. Szetchuan (Ta-tsien-lu north to the vicinity of Wenchwan). Black streaks on back and black centers of greater wing-coverts, innermost secondaries and central rectrices velvety black, the black streaks on the back being moderately broad; rufous markings on head very indefinite and much mixed with gray, giving a pale effect. In females and young birds the crown is definitely striped with narrow black streaks. Rump and upper tail-coverts buffy

rufous, the feathers of the rump edged paler rufous, and those of the upper tail-coverts edged light buff and sometimes showing a little blackish along the shaft; borders of wing feathers and of central rectrices light rufous, edged outwardly with pale buff; chin, throat, breast, and sides of neck pale blue-gray; and under parts buff, palest on middle of belly and deepest and most rufous near the edge of the gray breast. Males, wing 73.5–83.5; female, wing 78. 9 specimens examined.

Emberiza cia omissa.—Tsinling Mts., S. Shensi. Black streaks on back and black centers of greater wing-coverts, innermost secondaries, and central rectrices much narrower and a duller and rustier black than in *E. c.* subsp. 1, the black streaks on the back being much less definite, as well as much narrower; mantle a much warmer color, pale rufous-buff, not cool buff; rufous markings on head as in *E. c.* subsp. 1, but more sandy-colored and more mixed with buff than with gray; narrow black streaking on the crown in the females and young blackish brown, not pure black, and very indefinite and inconspicuous; rump and upper tail-coverts as in *E. c.* subsp. 1, but buff edgings of upper tail-coverts less pale, more rufous; borders of wing feathers and central rectrices broader and more rufous with the buff outer edging less pale, more rufous; chin, throat, breast, and sides of neck as in *E. c.* subsp. 1; and under parts also as in *E. c.* subsp. 1, but they average perhaps a trifle darker and more rufous, less yellowish. Males, wing 77.5–82.5; females, wing 72.5–82.5. 9 specimens examined.

Emberiza cia yunnanensis.—Lichiang Range, N. W. Yunnan. Black streaks on back and black centers of greater wing-coverts, innermost secondaries, and central rectrices deep velvety black, as in *E. c.* subsp. 1, the streaks on the mantle being broad and heavy; color of mantle much darker and more rufous than of the two preceding populations; rufous markings on head very dark, solid, and well defined and more extensive than in either of the two preceding populations or the one following; crown striped narrowly with black in the females and immature birds; rump light, bright rufous; the upper tail-coverts only occasionally edged with buff and sometimes showing blackish shaft-streaks; borders of wing-feathers and of central rectrices narrower, the rufous being deeper and brighter, and the buff outer edge narrower; chin, throat, breast, and sides of neck as in *E. c.* subsp. 1; middle of belly buff, and the rest of the under parts pale buffy-rufous, deepest on the flanks and near the edge of the gray breast. Averages a very little larger than either of the two preceding populations. Males, wing 80–85; females, wing 75.5–79.5. 16 specimens examined.

Emberiza cia subspecies 2.—Wanhsien, S. E. Szetchuan. Markings of crown as in *E. c. yunnanensis*, dark, solid, and well defined, but a trifle less extensive; upper parts, wings, and tail about as in *E. c. yunnanensis*, but not as much suffused with rufous throughout; gray of chin, throat, breast, and sides of neck a trifle darker and "bluer" than in *E. c. yunnanensis;* and under parts about intermediate between *E. c. yunnanensis* and *E. c. omissa* or *E. c.* subsp. 1. A much smaller bird than *E. c. yunnanensis* and slightly smaller than the other two races above mentioned. Males, wing 78–81; female, wing 75. 4 specimens examined.

Passer rutilans rutilans (Temminck)

2 ad. ♂ and 1 ad. ♀, Dec. 23–25, 1934, Chengtu.

It is questionable whether or not Chinese birds should be included

with typical *rutilans*. They do not possess (in fresh plumage!) the broad conspicuous buff edges on the feathers of the upper parts; the edges are much narrower and usually only on the upper mantle and rump, while crown and nape are usually uniform rufous.

[Concluded June 15, 1937.]